US Army Corps of Engineers

Norfolk District

Dredged Material Testing In The James River

Contact:

Robert Pruhs

Technical Support Section

Operations Branch

Why Test Dredged Material?

- Section 401 CWA, Water Quality Certification (WQC)
  - WQC required for the discharge of dredged material into waters of the U.S.
  - Discharge must be certified as complying with applicable State Water Quality Standards (WQS)

Why Test Dredged Material? (Cont'd)

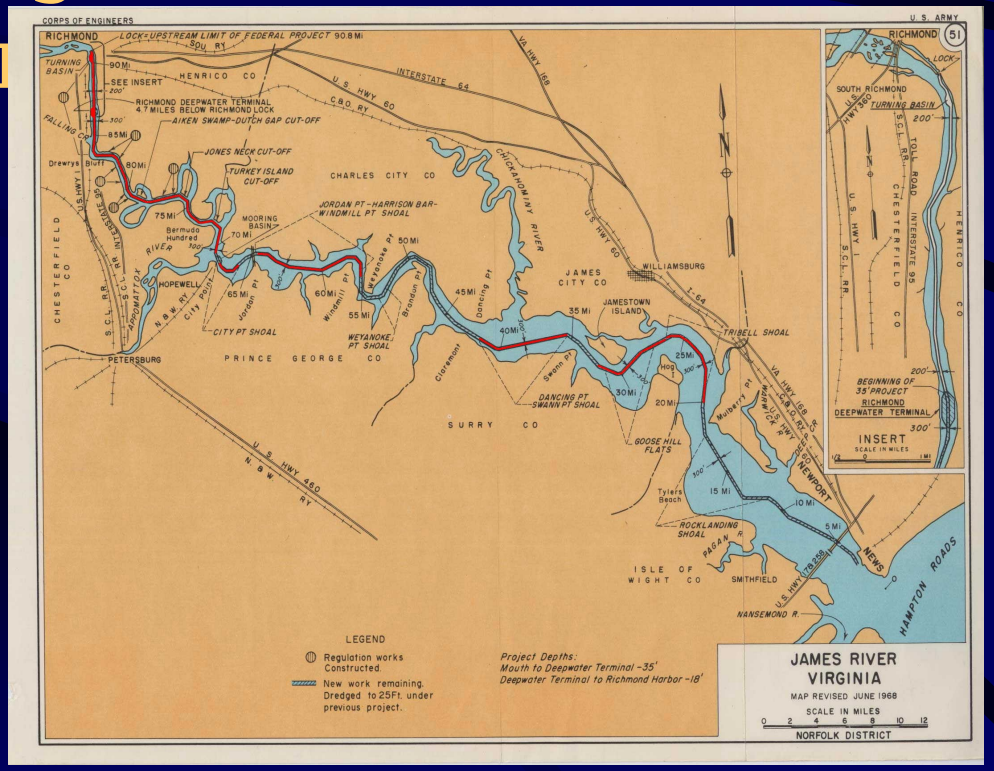
- Currently, Corps is renewing the Upper James River Virginia Water Protection Permit (WQC) through DEQ for maintenance dredging activities (mile marker 90 to mile marker 70)
  - DEQ has raised concerns that dredged material may contain contaminants
  - Specifically TBT, PCB, PAH, and Metals

Where Will Dredged Material Testing Occur?

- Currently, Corps is testing shoals at Richmond Deepwater Terminal and Turkey Island Cut-Off

Where Will Dredged Material Testing Occur?

- In the future, DEQ has requested that all shoals within the James River navigation channel be tested as dredgi



How is Dredged Material Evaluation to be Performed?

- Goal
  - Utilize the tiered approach and perform only the amount of testing necessary to make factual determinations
  - Implement the “Reason to Believe” principle for future sampling/testing events to ensure good stewardship of taxpayers dollars

How is Dredged Material Testing to be Performed?

- Corps has conducted a Tier I evaluation
  - Determined that additional information was needed

- Tier II & III: The Corps has developed a Sampling & Analysis Plan (SAP) utilizing the tiered approach developed under the framework established by the EPA & USACE manual “Evaluation of Dredged Material For Discharge in Waters of the U.S. – Testing Manual”

How is Dredged Material Testing to be Performed?

- Tier II: Involve determination of sediment and water chemistry

- Tier III: Effluent elutriate test will predict if effluent water from the respective upland placement sites act as a pathway for the migration of contaminants

How is Dredged Material Testing to be Performed?

- Tier III: Effluent elutriate test mimics the dredged material placement process in upland placement sites and predicts the release of contaminants (if present) as a result of placement operations
- Effluent elutriate test is a conservative evaluation of impacts to the water column

What are the Benefits of Dredged Material Testing?

- Tier III evaluation for the current testing event at Richmond Deepwater Terminal and Turkey Island Cut-Off can be used to predict performance of potential contaminants in similar upland placement sites along the James River
- Conducting dredged material testing in accordance with the EPA and USACE guidance will validate dredged material testing protocols

What are the Costs of Dredged Material Testing?

- Cost of dredged material testing at Richmond Deepwater Terminal and Turkey Island Cut-Off
  - $65,000 for sample collection and analysis
- What are the costs for testing dredged material at every shoal along the entire navigable James River?

What are the Potential Impacts to Navigation?

- Withholding of Water Quality Certification
  - Result: No dredging, restricted navigation
- Increased testing costs to meet environmental regulatory requirements
  - Result: Limited annual funding for James River Navigation Project may impact ability to maintain navigation

What are the Potential Impacts to Navigation?

- Potential permit condition to test dredged material prior to each dredging event will add significant costs and delays to maintaining

Questions
?